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ABSTRACT

This document contains three papers from a symposium on increasing participation in learning that was conducted as part of a conference on human resource development (HRD). "Factors Influencing Employee Participation in Training: An Empirical Investigation" (Reid A. Bates) reports on a mediated model of employee participation in training activities at a highway department. "Personal Development--I'm Not Really Interested!: Perceptions on Barriers to Learning for Mid-Career, Middle Level Managers in the Scottish Life Assurance Industry" (Martin McCracken, Sandra Watson) begins by reviewing the literature on potential barriers to learning for mid-level managers and proceeds to use empirical evidence from a qualitative study of mid-career managers in five Scottish life insurance companies to demonstrate that flatter organizational structures and changes in the traditional psychological contract can affect participation in learning, training, and development activities. "Lifelong Learning and Knowledge Transfer to the Workplace: A Longitudinal Case Study" (Graeme Martin, Judy Pate, Phil Beaumont, Jim McGoldrick) reports on a study of 114 participants in a lifelong learning program sponsored by a major United Kingdom employer, which demonstrated that participation in lifelong learning facilitates transfer of knowledge to the workplace and thus provides support for proponents of investment in lifelong learning and situated learning theorists. The papers contain reference sections. (MN)

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2000 AHRD Conference

Increasing Participation in Learning

Symposium 19

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Factors Influencing Employee Participation in Training: An Empirical Investigation

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This study tests a mediated model of employee participation in training activities in a public sector highway department. Results showed the combined predictor sets accounted for a significant proportion of the variance in an objective measure of training attended and a self-report measure of intentions to participate in training. Although the mediated model was not supported for both outcome measures, the findings suggest that adequate job-related workplace literacy skills are important factors contributing to employee participation in training.

Keywords: Employee Development, Training Participation, Basic Skills

Participation in learning, training, and other developmental activities is a major strategy for employee and organizational growth. For example, notions of continuous learning and lifelong learning stress individual responsibility and ongoing, active pursuit of learning as a means of career and personal development (Rosow & Zager, 1988). Organizations increasingly use learning to meet the adaptive demands of a dynamic environment. Organizational interest in learning and training is reflected in literature addressing learning organizations' (e.g., Pearn, Roderick, & Mulrooney, 1995) as well as rising investments in training, estimated at over $60 billion in 1998 (Lakewood Research, 1998). In addition, research suggests an organization's ability to learn is directly proportional to the degree to which employees themselves are willing and able to learn, change, and succeed at work (Bartel & Lichtenberg, 1987; Cohen & Levinthal, 1990). Although training is sometimes mandated to meet a variety of certification or regulatory requirements, involvement in most organizational learning and training activities is primarily a result of individual employee initiative (Noe, 1999). For these reasons, it is critical that HRD researchers and practitioners understand the individual and organizational factors that influence training participation.

Recent research at the individual level has begun to address antecedents of continuous learning and participation in training and developmental activities. Variables such as exchange of information, complexity of task assignments, perceived task uncertainty, and managerial support for development have been associated with technical updating orientation (Kozlowski & Farr, 1988; Kozlowski & Hults, 1987). Efficacy beliefs about personal skills and abilities, motivation to learn, perceived need for improvement, and social support have been found to be associated with participation in training (Maurer & Tarulli, 1994; Noe & Wilk, 1993). Research has also shown some employees receive less training than others as a function of position in an organization (lower job levels receive less training), job tenure and age (increases in each is associated with less training participation), and gender (Carnevale, Gainer, & Villet, 1991; McEnrue, 1989), suggesting organizational membership characteristics are related to training participation.

This body of research, however, has not yet addressed a number of other critical variables. For example, research has not yet examined the role that workplace literacy plays in training participation. Workplace literacy refers to the ability of individuals to effectively respond to the literacy demands of the workplace (Gowen, 1992). Workplace literacy skills are the basic skills needed by employees to successfully perform job duties, learn, and apply learning on the job. These include skills such as reading, writing, mathematics, and listening (Department of Labor, 1991). The relationship between workplace literacy, attitudes, and employee participation in development activities is important because it may influence an individual's awareness of development needs, his/her choice to participate in learning and other developmental activities, and his/her capacity to develop and improve performance through learning.

Research has also established that several dimensions of development climate can affect employee participation. These factors include both situational supports (e.g., manager feedback) and situational constraints (e.g., lack of money or time) affecting employee participation (Kozlowski & Hults, 1987). Research has not yet examined the role of more macro-level variables such as an organization's continuous learning culture (Tracey, Tannenbaum, & Kavanaugh, 1995). This is important because of the pervasive effect that an organization's culture can have on employee behavior (Noe, Wilk, Mullen, & Wanek, 1997).

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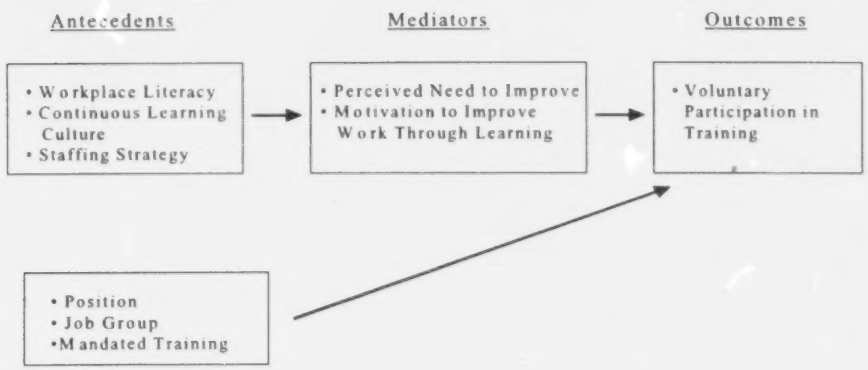
Finally, work by Sonnenfeld and Peiperl (1988) suggests that an organization's staffing policies may influence participation in training. That is, employee training attitudes and activity may be influenced by the extent to which they perceive their employer relies on the external labor market versus internal promotion to fill staffing needs. Employees in organizations that tend to promote from within rather than recruit from outside may believe that training participation is an important vehicle for promotion.

This study seeks to extend current research by examining the relationship between previously untested variables and employee participation in training. The study uses a conceptual model developed by Noe and Wilk (1993) to examine the relationship between antecedents, mediators, and training participation. The model (Figure 1), shows that the influence of workplace literacy, continuous learning culture (Tracey, Tannenbaum, & Kavanaugh, 1995), and staffing strategy is mediated by employees' need to improve performance, implicit training contract, and motivation to improve work through learning. Position in the organization is shown having a direct influence on training participation. A good deal of research has established that organizational membership variables such as position, job tenure, and so on have a significant relationship with developmental participation (Kozlowski & Farr, 1988; Kozlowski & Hults, 1987). For example, supervisors and individuals in relatively higher level positions are likely to have more opportunity to participate in training (e.g., see Lakewood Research, 1998).

Figure 1: Conceptual model of training participation



Sample

Participants in this study are 1079 individuals employed with a state highway/transportation department in the Southern US. The following general job groups were included in the study: Mobile equipment operator, highway foreman, engineering technician (entry level), engineering technician advanced/supervisor, and highway maintenance specialist/superintendent.

Procedure

The data in this study was collected as part of a larger needs assessment project conducted to address a number of organizational issues including workplace literacy and training transfer problems. The workplace literacy assessment instruments and the survey instrument were administered under the guidance of a Needs Assessment Team, co-directed by the researcher, with the assistance of the organization's District Training Specialists. On-site District Training Specialists administered the assessments to the participants during the months of January and February 1999. Of the 1218 individuals selected to participate in the assessment, 1079 (88.5%) completed the instruments. Participants were required to attend the data collection sessions but could decline to complete the instruments if they so desired.

Antecedent Measures

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Work Keys®. Data on employee workplace literacy levels were assessed using two scales from the Work Keys® assessment system. Work Keys is a set of eight criterion-referenced basic skills assessment tests. The tests measure an individual's cognitive and interpersonal skills against the proficiency required to successfully perform a specific job. Required proficiency levels are established by profiling specific jobs across the eight skills assessed by the Work Keys® system. Work Keys measures work-related rather than academic proficiencies.

Two Work Keys skills were assessed in this study. The *reading for information* assessment measured an individual's skill in reading and understanding work-related instructions and policies. Employees were tested on their ability to understand reading passages, based on actual demands of the workplace, that were in the form of memos, bulletins, notices, letters, policy manuals, and governmental regulations. The *applied mathematics* assessment measured an individual's skill in applying mathematical reasoning to work-related problems. The assessment required the examinee to set up and solve the types of problems and to do the types of calculations that actually occurred in his/her job. Examinees could use a calculator. A formula sheet was provided that included, but was not limited to, all required formulas. For each assessment, examinees were given 40 minutes to solve 30 multiple-choice problems. Proficiency levels for these assessments were established based on jobs previously profiled by Work Keys that were functionally similar to the jobs examined in this study. Because the focus of this study was determining whether satisfactory proficiency levels of workplace literacy skills influenced voluntary participation in training, individual scores for both assessments were dummy coded based on whether the individual met or did not meet the proficiency level for his/her job. The job groups and the proficiency levels required for each are shown in Table 1.

Table 1
Required Math and Reading Levels by Job Group

	Job Group				
	1 Mobile Equip Ops	2 Hiway Foreman	3 Hiway Main Sup	4 Eng Tech (entry)	5 Eng Tech (adv)
Req'd Math Level	3	4	5	5	5
Req'd Read Level	4	4	4	5	6

Continuous Learning Culture. Continuous learning culture (Tracey et al., 1995) is a construct that assesses the extent to which individuals perceive the work environment to be supportive of learning and the use of new knowledge. It is likely that the existence of a continuous learning culture within an organization will be an effective precursor to motivation to participate in training activities. Research has shown similar such work environments influence employee attitudes and participation in development activities (Kozlowski & Hults, 1987; Noe & Wilk, 1993). Continuous learning culture was assessed with a 15-item scale ($\propto$ = .91) developed by Tracey (1992). Sample items included "Job assignments challenge employees to learn new things" and "Co-workers are willing to listen to new ideas".

Staffing Strategy. Employees who believe their organization values expertise and prefers to develop and promote expertise from within rather than recruit it outside the organization will likely exhibit higher levels of motivation to participate in training. Individual perceptions of organizational staffing strategy was assessed by a four-item scale developed by the researcher ($\propto$ = .74). Sample items included "This organization promotes from within rather than hiring new people from the outside" and "In this organization, higher level positions are filled by promotion from within the organization".

Both of these scales were rated on a five-point scale with anchors from (1) strongly disagree to (5) strongly agree.

Mediator Measures

This study tests the notion that employee participation in training is directly influenced by individuals belief that they need to improve performance and that effort directed at performance improvement through training will pay-off in terms of favorable outcomes. This study tested this perspective using six scales that assessed various dimensions of training-related motivation. All mediator measure used a five-point response scale with anchors from (1) strongly disagree to (5) strongly agree was used for all mediator scales.

Perceived Need to Improve. This variable was assessed using a 4-item scale ($\propto$ = .71) developed by the researcher. This scale examined an individual's perceived need to enhance personal knowledge, skills, and abilities

in order to improve job performance. Sample items included "There are areas in which I need to know more to do my job better" and "There are ways in which training can help me do my job better ".

Motivation to Improve Through Learning. This study examined a new construct, motivation to improve work through learning, as a mediator of training participation. This second order construct is posited to more completely capture training-related motivational influences because it includes both motivation to train and motivation to transfer elements (Naquin & Holton, 1999). Five scales were selected to measure this factor. Three of these scales (transfer effort – performance expectations, performance-outcome expectations, and motivation to transfer) were taken from the Learning Transfer Systems Inventory (LTSI) (Holton, Bates, & Ruona, 1999). This 68-item instrument was developed to measure factors affecting learning transfer in work settings. Exploratory factor analysis of the LTSI has revealed an exceptionally clean and interpretable sixteen-factor structure (Holton et al., 1999). The *transfer effort-performance expectations* scale is a four-item scale ($\propto$ = .81) that assessed the extent to which individuals believed that applying skills and knowledge learned in training would improve their performance. Sample items included "My job performance improves when I use new things I have learned" and "The harder I work at learning, the better I do my job". The *performance-outcomes expectations* scale (five items, $\propto$ = .79) assessed the degree to which individuals believed that applying skills and knowledge learned in training would lead to recognition they value (e.g., "When I do something to improve my performance, good things happen to me"). These two scales address expectancy beliefs about the capacity of training to improve performance and the likelihood that changes in performance will lead to outcomes valued by the individual. The *motivation to transfer learning* scale (four items, $\propto$ = .80) examined the degree to which individuals were motivated to utilize new learning on the job. Items included "Training increases by personal productivity" and "I get excited about using my new learning".

Two other scales were used to assess motivation to improve work through learning. These scales were taken from the Strategic Assessment of Readiness for Training_(START) instrument. The START instrument (Weinstein, Palmer, Hanson, Dierking, McCann, Soper, & Nath, 1994) consists of eight 7-item scales designed to provide a diagnostic assessment of learning strengths and weaknesses in a work setting; provide baseline data about readiness to profit from training or other learning experiences; and to increase an individual's awareness of strategic learning strengths and weaknesses. The *attitude toward training* scale ($\propto$ = .80) indicated the value or importance individuals placed on participation in training for personal or professional development (e.g., "I enjoy training programs that help me to develop knowledge and skills that will be useful in my work"). The *motivation to participate in training* ($\propto$ = .68) scale examined the degree to which individuals are willing to participate in training and complete the tasks and work assigned to him/her (e.g., "I try hard not to miss any of the sessions during a training program").

Control Measures

Since the primary interest of this study was in identifying the variance in amount of voluntary training participation accounted for by the predictor sets independent of job group and previous mandated training, these variables were always entered first in the regression equations.

Job Group. Five different job groups were included in this study: mobile equipment operator, highway foreman, engineering technician (entry level), engineering technician (advanced), and highway maintenance specialist/superintendent. Job group data came from organizational records.

Previous Mandated Training Attended. The focus of this study was on identifying factors associated with voluntary participation in training. Because the amount of mandated training individuals were required to attend was presumed to limit the time available for voluntary training, time spent in mandated training was controlled. This factor was measured by a single self-report item that asked employees to indicate how many mandated training courses they had participated in over the past 12 months. Response categories ranged from 1 (zero) to 7 (six or more).

Outcome Measures

Two outcome measures were used in this study. The objective measure of participation in training included the total number of organization-sponsored training events that participants attended in the 12 months between January 1, 1998 and December 31, 1999. Data for courses attended by each respondent were generated from the organization's training database. A single-item self-report measure asked respondents to estimate the number of

days of voluntary job-related training they intended to complete in the next 12 months ("How many days of job-related training do you intend to complete in the next 12 months, assuming the courses are available and the decision to attend is left completely up to you?). Respondents were given a blank space on the questionnaire and asked to make their best estimate.

Results

Individual employees were the unit of analysis in this study. To assure a consistent sample across the analyses, observations with missing data were deleted. This reduced the regression sample size to 569 complete observations.

Descriptive Statistics. Means, standard deviations and intercorrelations of all variables included in the study are shown in Table 2. Data indicated that proficient levels of reading and math skills were positively associated with courses attended ($r = .13$ & $.16$, $p \leq .05$) and intentions to participate in training ($r = .16$ & $.18$, $p \leq .05$) but not with participation in mandated training. Job group showed no association with courses attended but was negatively associated with intentions to participate ($r = -.15$ & $-.32$, $p \leq .05$), suggesting employees in job requiring relatively higher levels of basic skills intended to participate in less training than lower level employees. Respondents' scores across the five motivation to improve work through learning scales were moderately high ($M = 3.0 - 3.8$), but there was no consistent significant relationship between these variables and either measure of training participation. Courses attended was moderately associated with intentions to participate ($r = .14$, $p < .01$). Mandated training attended was significantly associated with both courses ($r = .36$, $p \leq .05$) and intentions ($r = .13$, $p \leq .05$). The positive correlation between mandated training attended and intentions is surprising because it was expected that increased time spent in required training would leave less time for voluntary training.

Table 2
Means, Standard Deviations, and Intercorrelations

Variable	N	$\bar{x}$	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1Courses	743	9.1	7.9	--													
2Intend	743	12.2	14.7	.14*	--												
3Mandated	732	4.7	2.1	.36*	.13*	--											
4Group	724	--	--	-.04	-.32*	.11*	--										
5Culture	682	3.5	.60	.04	-.06	.10*	.00	--									
6Staff	718	3.6	.71	.08*	.05	.03	-.17*	.18*	--								
7Reading	723	--	--	.13*	.16*	-.02	-.40*	-.15*	.18*	--							
8Math	723	--	--	.16*	.18*	-.05	-.55*	-.10*	.22*	.74*	--						
9Improve	720	3.7	.55	.03	.06	.04	-.03	.26*	.15*	.05	.03	--					
10Motpart	713	3.8	.49	.17*	.06	.16*	-.02	.19*	.21*	.19*	.17*	.23*	--				
11Mottran	711	3.7	.66	.10*	.07	.14*	.05	.43*	.13*	-.04	-.02	.32*	.34*	--			
12POE	723	3.0	.80	.05	-.02	.05	.01	.64*	.20*	-.11*	-.10*	.27*	.14*	.47*	--		
13TEPE	723	3.7	.61	.06	.04	.10*	.03	.50*	.20*	-.04	-.02	.45*	.32*	.61*	.56*	--	
14Attlrng	716	3.7	.63	.08*	.11*	.08*	.02	.32*	.21*	.11*	.08*	.48*	.51*	.55*	.35*	.56*	--

* $p \leq .05$

Regression Results. Table 3 presents the hierarchical results for the total and unique effects of the predictor sets for both outcome variables. The combined predictor sets accounted for a significant proportion of the variance in both the objective measure of training attended in the past year ($R^2 = .19$) and self-reported intention to attend training in the future ($R^2 = .17$).

Table 3
Hierarchical Regression Results for Total and Unique Effects

			R^2 total[a]				R^2 unique[b]	
	N	R^2	Control[c]	A + M[d]	Control + A	Control + M	A	M
Courses	564	.19*	.15*	.04*	.18*	.16*	.01	.02*
Intend	564	.17*	.14*	.03*	.15*	.16*	.02*	.01

* $p \leq .05$

[a] Effects of other variable sets uncontrolled

[b] Effects of other variable sets controlled

[c] Control variables (job group and mandated training attended in the previous 12 months)

[d] Antecedents (continuous learning culture, staffing strategy, adequate/inadequate job-referenced reading and math proficiency) and mediators (perceived need to improve, transfer effort- performance expectations, performance-outcomes expectations, motivation to transfer, motivation to train, and attitudes toward training)

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Model Evaluation. Hierarchical regression analysis was also used to determine whether the model provided a reasonable description of the relations among variables as specified. Because the focus of this study was on predictors of training participation independent of mandated training attended and job group , these factors were always entered first in the regression models. An analytic procedure suggested by Cohen & Cohen (1983) was used to test the relationships suggested by the model. This analysis contrasted total effects, or the direct and independent proportion of variance accounted for by each predictor set, with unique effects, or the proportion of variance accounted for by the predictor set when the other sets were controlled. Direct relationships suggested by the model should produce significant total and unique effects. This would indicate that variance was not shared among predictors and therefore could not be mediated. Mediated relationships should show significant total effects but non-significant unique effects.

The effects of perceived need to improve and motivation to improve work through learning were hypothesized to mediate the influence of workplace literacy skills, continuous learning culture and perceptions of staffing strategy on actual training attended in the past year and intentions to participate in training in the future. Examination of the total and unique effects of antecedent and mediator variables provided mixed support for the model. After controlling for job group and mandated training attended, basic skill levels, perceptions of continuous learning culture and staffing policy had a significant total effect on intentions to participate in training and on courses attended. Comparison of the total and unique effects indicated the antecedents did not account for any unique variance in courses attended. Thus for this outcome variable it appears the effect of the antecedent measures was mediated by the motivational elements (perceived need to improve & motivation to improve work through learning factors) as hypothesized. However, the mediated relationship did not hold for self-reported intentions to participate in training.

Although the mediated model was not supported for both criterion measures, the predictor sets explained significant variance in both measures of training participation. Analysis indicated that control variables (job group and mandated training attended) accounted for .14 and .15 ($p < .05$) of the variance in courses attended and intentions to participate respectively. The regression models that included control and antecedent variables indicated the latter explained significant variance in both courses attended ($R^2 = .18$, $p < .05$) and intentions to participate ($R^2 = .15$, $p < .05$). Examination of the regression models that included only control variables and motivational elements also indicated that these variables accounted for significant variance in intentions to participate for both outcome measures ($R^2 = .16$, $p < .05$). Data show that antecedents and mediators added comparatively little to the variance explained in the outcome measures ($R^2 = .04$ & $.03$) beyond that accounted for by the control variables.

Examination of Beta weights (Table 4) in the unique effects equations indicated which variables accounted for significant variance in the training participation measures. Number of mandated courses attended was the only factor to have significant total and unique weights for both outcome measures, suggesting a direct relationship with courses attended and intentions to participate. Results indicate math level had a direct significant relationship with courses attended and job group made a significant negative contribution to intentions to participate. Significant unique contributions to both outcome measures were made by motivation to improve work through learning variables, specifically, motivation to transfer, transfer effort-performance expectations, and attitudes toward training. This implies these factors make a meaningful contribution to training participation.

Table 4
Beta Weights for Total and Unique Regression Models

	Group	Mandate	Culture	Staff	Math	Read	Improve	Motpart	Mottran	POE	TEPE	Attlrng
Course	.01	.38*	-03	.05	.20*	-.06	.01	.05	.10*	.04	-.09	.00
	(.03)	(.38*)	(-.04)	(.06)	(.20*)	(.02)	(.04)	(.03)	(.10*)	(.00)	(.09*)	(.13*)
Intend	-.45*	.19*	-.10	.00	.02	-.11	-.02	-.06	.06	-.06	.03	.14*
	(-.41*)	(.18*)	-.09	(-.02)	(.00)	(-.10)	(.04)	(.03)	(.10*)	(.00)	(.09*)	(.13*)

Note: Table displays the Beta weights for the predictor variables. Beta weights for total effects appear on top and those for unique effects below in parentheses.
* $p \leq .05$

Conclusions and Discussion

Several important findings emerged in this study that contribute to the understanding of training participation. First, the study suggests that employees who meet the basic skill requirements of their jobs participate in more training and intend to participate in more training than do employees who do not meet the basic skill requirements.

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Satisfactory math skill levels made a significant positive contribution to courses attended and both satisfactory math and reading levels were positively associated with courses attended and amount of intended participation. These findings suggest that adequate job-related workplace literacy skills are important prerequisites for employee participation in training activities and that employees who meet the workplace literacy requirements of their jobs are apt to participate in more training than do employees who do not. On the other hand, it is interesting to note that large negative correlations emerged between reading and math skills and job group ($r = -.40$ & $-.55$, $p \leq .05$). These date indicate employees in jobs that required relatively higher basic skill levels were less likely to meet the required proficiency level. Job group was also negatively associated with intentions to participate in training. Taken together, these data suggest employees in job requiring basic skills beyond current ability levels may intentionally avoid participation in training. Future research should confirm and examine these relationships in more detail. Specifically, research is needed to examine the interaction between job level, basic skills proficiency and training participation and whether changes in literacy levels are associated with changes in training participation rates. Research should also address whether employees with satisfactory workplace literacy levels are more aware of their development needs than employees with unsatisfactory levels and the extent to which workplace literacy levels affects participation in other types of development activities (e.g., career assessment and planning).

Second, the results did not support the proposed model across both dependent variables. Although motivational elements emerged as significant mediators for courses attended, they did not for intentions to participate. Also, the control variables explained a substantially larger proportion of the variance in outcome measures than did antecedents and mediators combined. It is unclear whether these results are sample-specific or due to some other factor. On one hand, it is also possible that other unexamined factors were at work. For example, the findings could indicate that intentions to participate in future training participation are influenced by different factors than past training participation. Intentions to participate may be contingent on an individual's perception that training will enhance adaptability to work demand or anticipated job changes, or will contribute to career advancement. Past training participation, on the other hand, may be more contingent on perceptions of organizational support for training and its application (Kozlowski & Farr, 1988; Noe et al., 1993). It is also possible that employees in this study did not distinguish between mandated and voluntary training participation. Subjects in this study were relatively low-level public sector employees who were not typically encouraged to make voluntary requests for training. Although employees in this organization could voluntarily elect to attend training , training was a primary requirement for advancement. This may have generated the view among employees that training was largely mandatory. As a result, the study may have in effect attempted to predict voluntary training participation using measures that reflected mandated training. Future research should test this model with a different population of employees in settings where voluntary participation in training and development activities is emphasized. Longitudinally designed studies would add to our understanding of future development intentions and actual future participation.

Third, significant unique contributions to both outcome measures were made by motivation to improve work through learning variables, indicating these factors make a meaningful contribution to training participation. This is important to the extent it suggests this factor is an important precondition for training participation. Further work is needed to more fully understand the role of this construct in employee development. Research is needed to confirm its role as a mediator in training/employee development activities and identify what individual characteristics, training-related factors, and work environment features contribute to this factor in the context of employee development.

Finally, a number of constructs suggested by previous researchers as potentially important predictors of development activity did not emerge as such in this study. Continuous learning climate (Tracey et al., 1995) was not significantly associated with either measure of training participation, although it did exhibit strong positive correlations with the motivation to improve work through learning scales. Organizational staffing policy (Sonnenfield & Perperl, 1988) was weakly associated with courses attended and was not a predictor of either courses attended or intentions to participate. This latter finding was somewhat unexpected given that the public sector organization in which this study took place had an explicit policy encouraging internal promotions based in part on completion of training. Future research should reexamine the role of these variables in predicting voluntary training participation as well as other kinds of employee development activity.

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'Personal development-I'm not really interested!': Perceptions on Barriers to Learning for Mid-Career, Middle Level Managers in the Scottish Life Assurance Industry

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The paper discusses literature relating to potential barriers to learning for all managers, and then concentrates on the position of middle level mid-career managers in more detail. For example, 'flatter organisational structures, and changes to the traditional 'psychological contract' (Hiltrop 1996) can affect participation in learning, training and development activities. Empirical evidence from a qualitative study of mid-career managers in five life assurance institutions in Scotland is presented.

Keywords: Barriers to Learning, Middle Management, Life Assurance

All sectors within the Financial Services Industry have undergone significant and extensive transitions throughout the 1990's (Park, 1999). Changes relating to increasing globalisation, competition, demutualisation, technological advances and merger and acquisition activity have intensely affected the nature of the insurance sector, with life assurance in particular continuing to be characterised by extreme volatility (Matthews, 1998; Genetay, 1999; Murray, 1999; BBC, 1999). Flatter organisational structures and shifts in the traditional 'psychological contract', which are felt to be responses directly attributable to upheavals occurring at the macro level, are characteristics of many organisations (Beer et al., 1984; Hiltrop, 1996). An important consequence of these developments is that managers can no longer rely on the job security which was once associated with the industry. Major downsizing and the threat of redundancies are present even amongst the most successful of companies (Cressey and Scott, 1992; Gall, 1993; Storey, 1995; Antonacopolou, 1999; *The Scotsman* 6 February 1996). Given this background, a central assumption made in this paper is that shifts occurring at the environmental level will influence managers' participation in effective learning and development activities. However the decision to participate and complete training is an individual choice, which will be influenced by individual perceptions of barriers to learning. It is therefore necessary to examine barriers to learning from this perspective to build a greater understanding of learning in organisations.

Effective learning and development is felt to be a fundamental condition for organisations and individuals aiming to build a sustainable future (Garratt, 1960; Salaman & Butler 1990; Senge, 1990; Nonaka, 1994). This paper reports on findings from a study which focused on managers in the Scottish life assurance sector occupying mid-career middle level managerial positions. The mid-career manager has been defined by Maguire & Fuller (1995) as, *"Someone who is in their mid-thirties and forties who, having attained some experience in managerial jobs, is looking to progress or at least consolidate their careers."* The role of middle management has been described by Floyd and Wooldrigde (1997: 465) as *"performing a co-ordinating role where they mediate, negotiate, and interpret connections between the organization's institutional (strategic) and technical (operational) levels.* The core aim of this study is to contribute and build upon existing literature which explores managerial participation in learning by empirically investigating the perceptions and experiences of middle level, mid-career managers in the financial services sector in Scotland.

Before the actual findings from this study are presented, environmental factors, which influence managerial learning, are presented. Secondly, a discussion on the barriers to learning is undertaken (Temporal and Boydell, 1981; Stuart, 1984; Mumford, 1988). Finally the impact of organisational change on the role and position of middle level, mid-career managers is presented.

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Management Learning Environment

Antonacopolou (1998) examines management development and learning at societal, industrial, organisational and individual levels. Her model provides a holistic view of where learning takes place moving from the individual learner through to society in general, identifying the interdependent nature of the various levels. Allied to Antonacopolou's framework, is the model which deals with the different actors within various levels of training provided by Mabey, Salaman and Storey's (1998) Strategic training and development: a stakeholder approach' illustrates the factors which can influence how individuals learn in organisations.

These frameworks highlight the complexity and interdependency of a range of internal and external influences on learning. The purpose of this paper is to build an understanding on barriers to individual learning through the presentation of data focusing on both intrinsic and extrinsic blocks to managerial learning.

In this study, the learning activities which are investigated relate to activities which theoretically further a managers skills and competences in their professional or vocational life. Factors which impact on managerial participation in such activities are analysed by Temporal and Boydell (1981) and Marsick and Watkins (1990), who deal with the issue of managerial learning and development in the organisational context. Temporal and Boydell (1981) explore the nature of managerial learning behaviour, the factors that help or impede managers in the development of general learning and the effect that the general learning climate within the organisation has on the development of the individual. Temporal and Boydell (1981) have formed the Organisational Model of a Management Learning System', comprising four interrelated constituents influencing the process.

The first component relates to both the formal learning structures in the organisation within which managers have to operate, such as job descriptions, and to the externally set management development and training objectives. The second is concerned with everyday working relationships as well as the more specific opportunities which can offer developmental prospects for the manager, such as internal and external training and development courses. Thirdly, the qualities of the individual learner are considered. The intellectual and cognitive ability which the individual has for new learning. is viewed as vital to overall development. Temporal and Boydell (1981) also propose that the learning climate plays a significant role in determining the extent to which learning and development is effective in the organisation. Essentially, this aspect relates to the company culture which they define as those elements within the managers' environment which encourage or discourage learning or desirable behaviour'(Temporal and Boydell, 1981:2).

The work of Marsick and Watkins (1990: 7) closely mirrors many of the key aspects of the learning system described above. In their assessment, employees in organisations can experience three different types of learning: the more formal type which may have been traditionally delivered in the classroom; informal learning which occurs through a manager's day-to-day interactions, and lastly incidental learning which is described as a *"by-product of some other activity such as a task accomplishment, interpersonal interaction, sensing the organisational culture or trial and error experimentation"*.

Other observers such as Thomas and Al-Maskati (1997) and Antonacopolou (1998) stress the importance of the specific organisational context. Temporal and Boydell (1981) underline the fact that the four components are inherently interconnected and ultimately determine the efficacy of such learning for individual managers. For example, an organisation could provide excellent opportunities for learning and development but these may be irrelevant unless the individual either has the capacity to understand what is being taught or opportunities to use the skills engendered through such development.

Barriers to Learning

Temporal and Boydell (1981) categorise a full range of barriers or blocks to learning that may be encountered by these managers. These are separated into intrinsic factors, which are described as being owned by 'the learner, and extrinsic or external factors, which are consequences of environmental forces and pressures. From these two major headings, Mumford (1988) has developed a classification of ten categories. Table 1. illustrates the range of potential managerial barriers to learning.

Table 1

Barriers to Learning for Managers

Nature of Block/barrier	Clarification
Intrinsic	
Perceptual	Not seeing there is a problem
Cultural	The way things are here
Emotional	Fear or insecurity
Motivational	Unwillingness to take risk
Cognitive	Previous learning experience
Intellectual	Limited learning styles / Poor learning skills
Expressive	Poor communication skills
Extrinsic	
Situational	Lack of Opportunities
Physical	Place, time
Specific environment	Boss/colleagues un-supportive

Source: Adapted form Mumford (1988: 26)

The first seven of these barriers are closely aligned to the intrinsic factors as defined by Temporal and Boydell (1981). For example, perceptual barriers to learning may exist where managers do not perceive there to be any requirement for further development due to their apathetic attitude regarding current position or future career security. Another example of an intrinsic factor is the emotional barriers to learning. Mumford (1988) proposes that these are linked to fear or insecurity which may inhibit participation in further development activities. The final three learning barriers are linked to the extrinsic environment. These may be either linked to the physical aspects of the manager's work location or to the attitudes of senior managers or colleagues towards mid-career managers' participation in development activities.

By categorising the comments and observations of the managers, we can begin to assess the impact of each barrier and expose the interrelationships between these elements. At this point, it is necessary to understand the differences between the two groupings. It is felt that intrinsic barriers are owned by the learner and these are therefore perceptions over which they have control. On the other hand, extrinsic or environmental barriers are out-with the locus of their individual control. In this way, it follows that the variables that are present in relation to the intrinsic values lead to diverse perceptions on the extrinsic. For example, the perceptions, motivations and emotions of one manager from another may dictate a different response to a physical or situational barrier according to his or her locus of control.

In order to clarify these extrinsic factors it is necessary to understand current changes in organisations that are impinging upon the role and position of middle level, mid-career managers in the financial services sector of the Scottish economy.

Organisational Change

Much of the literature on recent organisational change describes an increasingly insecure position for middle managers in modern organisations (Dopson and Stewart, 1993). Fenton O'Creevey and Nicholson (1994) point out that when organisations implement rationalisation programmes there are many perceived negative implications for those in middle management positions. These are associated with issues of future job security, career prospects, and the nature of the work for those who are survivors of corporate downsizing and redundancy programmes. The obvious implication of delayering on learning and development is that, with fewer middle managers around, there will be increasing work pressure on those who do remain in flatter organisations, which may hinder their continued participation. Therefore time becomes a major constraint for further development. Pessimism surrounding those in mid-career and middle level management may induce a varied set of factors which inhibit participation in learning activities. For example, middle level managers who perceive there to be a threat to their

positions may contend that it is pointless participating when it appears to provide little security to former colleagues.

Associated with the development of flatter organisational hierarchies is what is described as the early career plateau. If this is a feature in organisations the manager may only have the option of lateral moves in the organisation's hierarchy for renewed interest and challenge (Evans and Gilbert, 1984; Nicholson, 1993). Given this background, embarking on new learning opportunities may appear to be futile to middle managers faced with such a scenario and may lead to them looking for other avenues in life outside work for challenge and stimulation.

The emergence of a 'new deal' between employers and their managerial employees is another aspect of organisational change, which has been the focus of recent studies (Kerfoot & Knights, 1993; Stiles et al., 1997; Knights & McCabe, 1998). These 'new deals' have, in effect, amounted to a re-negotiation of the traditional 'psychological contract'(a phrase first coined by Argyris in the 1960s). In the past organisations (especially in the life assurance sector) offered contracts that were paternalistic in nature, where loyalty and commitment generated security, regular promotions, the provision of high quality training and development and salary increases. Recent changes include the use of more temporary and agency staff as well as the provision of more short and fixed term contracts for employees in financial services organisations. This has resulted in a reciprocal and 'what's in it for me' attitude amongst employees influencing the employment relationship. (Herriott et al., 1996; Hendry and Jenkins, 1997; Hayes and Hudson, 1995; IRS Employment Trends, 1997)

When specifically considering training and development provision as part of the psychological contract, Stiles et al. (1997) argue that managers attach significant emphasis on what development opportunities they are offered, viewing these as symbolic of how the organisation views their future career prospects. Hence, in the past, training and development was seen to be employer led and was designed to prepare employees for a career within the organisation. However, as careers have been redefined, Stiles et al. (1997) have found that emphasis on training and development in the new psychological contract has been realigned towards providing employees with skills which promote their overall employability. In addition, more emphasis has become attached to individuals taking a greater responsibility for their own development.

What effect do these changes in the psychological contract have in relation to participation in learning for middle level mid-career managers? Again Stiles et al. (1997) make the important point that, in the organisations that they studied, there were apparent differences between the philosophy and the practice of these new psychological contracts where the intended aim of these 'new deals' was to encourage benefits like increased flexibility for employees in the external labour market. However it would seem, in reality, that changes in the psychological contract, allied with other changes in the employment relationship, have produced more frustration amongst employees. Many of these issues are revisited when the findings are discussed in more detail.

Research Methodology and Data Collection

This research used a qualitative mode of inquiry. In order to explore barriers to learning, middle level mid-career managers from five of the largest life assurers boasting a Scottish head office data was collected using depth interviews. There are several reasons why such a qualitative methodological approach is taken. The most important of these relates to the contextual environment where the research is to be carried out. The issue of control over the actions of the units of analysis that are being investigated is of importance here. As Yin (1994) points out, the researcher needs to be aware of the influence which he or she has over the study subjects, and how this may impact on the findings. The major advantage in using qualitative semi-structured interviews with middle level, mid-career managers, (68 in total and an average of 13.5 per organisation) was to allow the interviewees to discuss using their own terms and expressions, their attitudes, motivations and perceptions of the world. It was accepted that the individual manager's perceptions would be influenced by the social constructs of both the organisation and wider environment. The main aim was to allow the study to remain open and holistic to achieve an understanding of the interplay between the individual managers' perceptions and the wider environment.

In terms of the practicalities of the data collection, in selecting managers for interview attempts were made to ensure that all the main functional areas in typical life assurance organisations were represented, i.e. Administration/Pensions, Investment, Information Systems, Marketing, Actuarial, Compliance and Personnel/Human Resource Management. In order to capture an organisational perspective and a contextual overview of Training and Development strategies in each of the organisations, managers who were responsible for

Training and Development were also interviewed. As this paper is primarily considering the individuals perceptions of barriers to learning the findings from these interviews are not discussed.

In the interviews conducted with middle level mid-career managers the questions covered a wide range of issues. The first section which concentrated on personal experiences and perceptions of learning, consisted of gauging the managers comments on issues such as their reasons for undertaking certain learning activities; their preferred methods of learning; the factors that had inhibited them in the past; how they felt their career could develop in the future, and their perceptions of how management training and development could influence this. In the second section, the focus shifted to the most important pressures which the managers thought were taking place in the external environment, and how these might affect the training and development culture in their organisations.

For reasons of confidentiality neither the name of the organisation nor the manager who forwarded the information is given. Instead, pseudonyms which are based on Scottish geographical regions are employed to conceal the organisations' identity (Central Life, Lothian Life, Highland Life, Grampian Life and Borders Life). However the gender, job title and age of the participants are supplied to help provide a context for the reader.

Empirical Findings

In this section examples from the actual transcripts have been isolated to illustrate the experiences regarding the various barriers to learning. Firstly, barriers which are linked to the managers intrinsic attitudes, motivations and perceptions are presented. For example, their previous experiences of learning activities or their perceived need for future participation in learning activities. Secondly, those barriers related to the organisation or other environmental forces are addressed.

Perceptual Barriers to Learning

In Mumfords (1988) analysis a perceptual barrier is felt to occur when the 'individual does not see that there is a problem' in relation to participating in potential learning activities. Many of the managers felt that they were professionally successful and often did not see any 'problems' in their work (related to what they personally could do) which participating in learning activities would change. The following examples illustrate this:
"I've probably been around for so long here that I feel I know enough thank you very much"... . . Female, Life Customer Services Manager, Age 47: Central Life.
"I'm maybe getting close to that point where I'm quite happy here... So in terms of my personal development, I'm not really interested." Male, IS Technical Manager, Age 36: Central Life.

An interesting aspect related to this is that some interviewees expressed a preference to concentrate on their work in the shorter term. Development and learning activities were something in which they were not interested. 'Some people that have done MBAs do appeared to have advanced but *I'm not interested in gaining academically in that way.* I'd rather concentrate on *improving myself for the job or similar jobs...*". Male, Assistant Marketing Manager, Age, 45: Highland Life.

Cultural Barriers to Learning

Mumford (1988) describes cultural barriers to learning as when a manager is constrained from engaging in learning activities because of the way things are here'. Such intrinsic barriers may originate as a result of exposure to the culture of the workplace and domestic life. Often, concerns over the time spent with one's family appears to take precedence over continued learning and development, particularly when considerable effort is needed to achieve the required levels of motivation to complete useful learning. One quote from a manager illustrates the problems associated to this:
"An MBA crossed my mind but,.....with 3 young children, I'm not convinced how much time I would be able to devote,...." (Male Pensions Manager aged 38 - Lothian Life)

A number of managers mentioned that they tended to be quite conservative. This trait is something that is often associated with the financial services industry and the Scottish life assurance sector particularly, which has a reputation of being built on prudence. Therefore it was not surprising that some of the managers appeared to

express such tendencies when it came to learning and development activities. For example several managers across the organisations described themselves and their organisations as being 'conservative'.

Emotional Barriers to Learning

Emotional barriers to learning are associated with individual insecurities, which may cause reluctance to take action in certain areas and hence hamper participation. Some managers clearly exhibited certain emotional barriers. For example, uncertainty and insecurity about their organisational positions. This point is particularly relevant when considering issues concerned with organisational change. One female manager described her expectation that the issue of early retirement would arise before she reached statutory retirement age.

"I still envisage that there will be a time, long before I reach retirement age, where theyll say youre on early retirement or there isnt actually a job for you anymore ". Female, Process Improvement Manager, Age 46: Highland Life.

Some managers were pragmatic in assessing their chances of potential success in terms of learning activities at the present time (particularly formal learning and development). A common response was their perception that certain learning activities were risky, given the pressures that already exist in their jobs and the very real possibility of failure.

"From a personal level, I like to lead a full life and I was looking with a view to do the part time/weekend MBA course and I realised there wasnt enough hours - Im certainly more motivated to study, but I wouldnt ..set myself up for a fall, ... I would want to fully commit myself and give it a good shot and I dont think I would be inclined to start something... only to fall at an early hurdle. That would de-motivate me." Male, Process Support Manager, Age 35: Borders Life

Another related reason was how far one could go before reaching a level of incompetence.

"Im realising that Im reaching my limits.... Im close to my limits and I dont really want to go to a point where Im not doing the job very well or Im having to say, well I dont really want to do that ." Female, Process Improvement Manager, Age 46: Highland Life.

Motivational Barriers to Learning

Motivational barriers to learning were felt to arise for managers who were unwilling to take risks to participate, or who were simply not interested in further learning. As can be seen from the literature, these concepts of risk, uncertainty and insecurity in the workplace are very real concerns for mid-career managers in financial services. It was therefore not surprising for managers to forward opinions questioning the real benefits of participation in learning activities.

"I suppose your motivation to do it really, I suppose to be convinced that it was worthwhile, whatever worthwhile might mean... I dont suppose we have had a tremendous opportunity to become involved in anything much ." (Manager aged 39 Lothian Life Compliance Male)

"One of the reasons I stopped was ... because the job Im doing just now is fairly busy and pressurised and everything at work is changing. I feel that the return on investment is probably not there, for where I am career wise.... I think it does no harm, but Im not convinced that its a great thing ." Male. Project Manager, Age 41: Highland Life.

For some the predominant feeling was that it was more beneficial to place emphasis on their actual jobs and core tasks. If we consider that, for some of the interviewees and especially those who are qualified Actuaries, Accountants and Insurance Officials (Association of Chartered Insurance Institute), it may have taken five or six years to become qualified, it is perhaps not surprising that the thought of more formal qualifications was prohibitive. The following comments explicitly illustrate this:

"Ive done the actuarial qualifications .., where there was an intense amount of study. Since then.....I really have no plans to do any more exams." Male, Client Services Manager, Age 44: Grampian Life.

Cognitive Barriers to Learning

The previous learning experiences were considered to be an important source of potential blocks. What can be ascertained from previous experiences and perceptions of learning was whether these affected decisions

regarding further study. Some managers felt that they had not exactly enjoyed their previous experiences at school or university.

"*I was shocked quite frankly when I got to University and it was so poor - you know I was expecting something much better than I had experienced at school - I was disappointed I think .*"

and

'I did also go to ..evening University classes in management development and that was fueful'- ... what you are really looking for I think is practical -... hints, tips and real life examples and really the benefits of other peoples real experience of dealing with people ."(Female Compliance Manager aged 43; Lothian Life)

Environmental Extrinsic Barriers to Learning

As has been previously mentioned, these are particularly turbulent times for the financial services sector in the UK. Considering this contextual background it is not surprising that those barriers connected to the wider environment, beyond the direct control of the individual learner will impact on participation. Evidence was found that the managers felt that elements of all three extrinsic barriers greatly affected where, what and how they participated in learning activities.

A significant theme relating to travelling to, and location of development opportunities emerged. Many of the managers expressed concern about inadequate provision of courses, seminars and conferences, in the Scottish geographical area. The criticism that 'London or the South', and increasingly abroad, would normally be chosen to host relevant events was also made. As a result of this many felt they would be less likely to participate in such events. One manager summed up the situation quite graphically when he pointed out that:

" *I have a problem in that these things (I.T.conferences) hardly ever happen in Scotland ... ..I do feel that Scotland is treated as a kind of backwater .*" Male, IT Customer Services Centre Manager, Age 47: Grampian Life.

As well as feelings regarding the actual location of the learning activities several managers also brought up the issue of participation and reward in this context. It would seem reasonable to suggest that, in order to encourage participation in renewed learning and development activities, benefits or rewards would require to be in place. Given the level of uncertainty which surrounds this industry at present, it would be expected that the rewards would be linked to providing some security in the future.

It was also apparent that a number of managers across organisations had problems in interpreting the organisational value of certain vocational qualifications and development activities.

"An MBA crossed my mind but, ... there's no evidence that the company treats this in a particular way, you might think, for someone with an MBA and someone without one, that should be the first point. There's no guidelines or feedback from management or personnel that it is something they recommend ." Male, Pensions Manager, Age 38: Lothian Life.

The issue of time and space for pursuing and completing learning activities has arisen. In responses across all the organisations the vast majority of managers singled out severe time constraints as the most biggest perceived constraint to participation. Managers summed up the problem that exists for them as a result of these time pressures as follows:-

"*I'm learning but I'm not learning as much as I could, I'm bogged down in admin. and paperwork quite a lot of the time that is preventing me from developing in other areas.* " (Manager aged 38: Pensions Manager: male)

"Now though the barrier to learning and further learning is without doubt the office activity - I'm busier now than ever before and there's no sign that that's going to diminish... More is expected now than ever before, workforces are generally are leaner and fitter and all that means is that they are turning more stuff out with fewer people... So that is the barrier now but that's life...." (Manager aged 40: All Lothian Life)

As well as these physical pressures, which proved to be a common feature of contemporary managerial careers, the obligation to work long and demanding hours as a result of the current economic climate was felt by many managers.

"..certainly on the level, one or two down from the top, the management level if you like there's probably a fairly intense pressure for most people.. and getting worse." Male. Project Manager, Age 41: Highland Life.

The above statements clearly highlight the pressures simply to survive, which in turn impact on undertaking any new learning and development activities. The specific environment of the organisation does play an important role in determining participation in learning activities. These are integrally associated with the support that managers receive for learning. In this study an attempt was made to understand the organisation culture in relation to learning and development. The prevailing issue to emerge was that top level do not take

learning and development seriously enough. Phrases like 'lip-service' constantly arose when senior managers and training and development were mentioned together.

> *'They're making a positive attempt to encourage management development.... The difficulty with all management courses is applying it when you get back in. Four or five of us at my level went to a strategic management course - it's fascinating, very interesting and relevant and it's very obvious who should be doing it but it's not a priority as far as senior management is concerned." (Manager aged 46)*

In general what can be observed from the findings is that there are very real barriers to learning. However, emphasis is given by all managers to extrinsic factors, which appear to be caused by the turbulent external environment. In effect the main finding in this study would suggest that as a result of the increasingly uncertain environment in which these managers work many of the intrinsic barriers and blocks to learning are amplified to the point where the manager is severely constrained to undertake any kind of activity which has a longer term development perspective.

Conclusions

Elements of all the barriers, identified in Table 1 were in evidence, however less emphasis was found on intellectual and expressive barriers to learning. These factors are associated more with learning process, rather than participation and are therefore out with the scope of this paper.

Although, classification of barriers to learning is useful for providing a structure to explore the subject matter, a significant proportion of respondents experienced multiple learning barriers. The initial analysis of the data has highlighted the critical influence of the extrinsic barriers to learning. However in order to gain a better understanding of the locus of these multiple barriers, the next stage of the research will be to integrate Mumford's (1988) classification with Mabey, Salaman and Storey's (1998) Stakeholder Approach to provide a three dimensional perspective of learning barriers. The intention is to interpret which barriers are most relevant at which levels of learning. Initial superficial analysis shows that:

1. At the societal level, as an adult learner the middle manager must deal with family responsibilities and non-work interests, and therefore there are physical and situational barriers to consider.
2. At the industry/sector level, there are pressures relating to the managers' position and job security, due to the sector changes and pressures.
3. At the organisational level, specific examples are seen in relation to support by department and colleagues. Unfavourable / un-supportive culture and political environment in the organisation, were also cited as learning barriers.
4. At the individual level there were personal/ intrinsic pressures in the themes of emotions, perceptions and motivations which were presented as barriers.

These initial findings highlight the fact that barriers exist at all levels, reinforcing the interdependent hierarchical nature of learning barriers. This in turn has implications affecting the choice and content of interventions used by organisations to encourage and harness management learning.

It may be necessary to explore ways in which the organisation can support managers participating in learning. Individuals with an internal locus of control are more inclined to be proactive in taking up opportunities, and therefore the organisational culture should be explicitly geared to improving the perceived locus of control. Crowder and Pupynin (1993), using Rotter's (1966) definition, propose that 'individuals with an internal locus of control believe performance to be contingent on their own behaviour while individuals with an external locus of control believe that outcomes are beyond their personal control' Crowder and Pupynin (1993:19). However, the findings illustrated that there are managers who have reached a stage in their career where they are happy with their quality of life and are lacking in the motivation to progress any further. Learning interventions, for these individuals, needs to be predicated on an overall organisational culture which forcefully stresses the philosophy of continual change, reinforcing the message that learning is vital to organisational survival and growth.

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Lifelong Learning and Knowledge Transfer to the Workplace: A Longitudinal Case Study

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This paper explores the influence of a program of lifelong learning on knowledge transfer to the workplace in a longitudinal study of a major UK employer. Drawing on quantitative and qualitative data from a cohort of 114 participants in a company-sponsored program of continuing education, our findings indicate the kind of benefits that organizations may expect in terms of knowledge transfer to the workplace. They also provide support for proponents of "schooling" and situated learning theorists.

Keywords: Knowledge, Transfer, Workplace

Interest in company investment in human resource development (HRD) through programs of lifelong learning has rarely been higher, with governments keen to promote continuing education as a means of achieving economic objectives. As many economists, however, have argued, the notion of national interest is not always consistent with organizational interests since old style guarantees of job security and career development may be a denial of current labour market conditions (Cappelli, 1998). Instead some employers and academics have called for "new deals" that promote the idea of self-development among individuals as a means of enhancing their general transferable skills for employability in return for short term commitment and loyalty (Garavan, 1999).

These ideas of employability and general transferable skills being a source of mutual advantage for organizations and individuals are sometimes seen as little more than a convenient rhetoric for employers wishing to escape their traditional commitments to old-style psychological contracts (Herriot, Hirsh & Reilly, 1999) and may be based on a false sense of what is necessary for individual and organizational learning. On this last point, much of the newer literature on workplace learning has highlighted the importance of *situated learning* and the need to de-privilege formal, abstract knowledge which underpin the case for generic transferable skills being a source of individual and organizational advantage (Seely Brown & Duguid, 1994, Torracco, 1999). It is against such a background that we address the question of whether company-based programmes of lifelong learning through continuing education provide significant returns to the company in terms of knowledge transfer?

The contributions of this work are at least three-fold. First, we believe that the findings have some important theoretical implications, especially for the employability debate and the workplace learning literature. Second, they have implications for sceptical employers who believe that continuing education and investment in HRD benefits employees but does little to develop firm-specific skills. Third, the findings have relevance for educationalists who wish to contribute positively to the agendas of employers and governments by providing relevant continuing education (see the debate over Mode 1 and Mode 2 learning, Huff, 1999, September).

Performance Improvement, Psychological Contracts And Knowledge Transfer

The Epistemology of Knowledge Transfer

In discussing knowledge management, learning transfer and organizational learning, it is necessary to consider two alternative perspectives or epistemological orientations found in the relevant European and US

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literature (Huemer, von Krogh & Roos, 1998; von Krogh, Roos & Kleine, 1996). The first of these has been labelled *representationalism*, which is a view of knowledge that (a) represents a pre-given, universal and objective world, (b) is relatively easy transferred and, (c) can be used directly to solve problems in a somewhat detached fashion. The second is *autopoieticism*, which rejects the notion of a pre-given, objective world that, for example, can be easily represented by mapping techniques (Weick, 1994) or other such static representations (Chia, 1999), and also rejects the abstract nature and ease of transfer of knowledge. Instead, autopoietic theorists argue that organizational knowledge (a) cannot be separated from the observer but rather should be seen as something that is produced and shared among members of a community of practice (Lave & Wenger, 1991; Seely Brown & Duguid, 1994), (b) is rooted in an organization's history, and (c) demands and relies on the creation and development of a common language or *discourse of practice* among community members (Lave & Wenger, 1991)

Because our initial research aims were essentially practical and demanded a strong element of measurement in producing evidence on the outcomes of continuing education initiatives[1], initially, at least, we adopted a representationalist perspective on knowledge. During the course of the research, however, we have gradually come to the view that our approach was both limited and limiting. This recognition was, in part, a consequence of the findings of the survey data but, more important, because we found participants in our study had difficulty in identifying with the key assumptions of representationalism. These difficulties were most obvious during the interviews when respondents had problems in disentangling the relationship between individual learning and workplace learning and in separating themselves from their communities of practice as a source of innovation and improvement. Thus, to interpret some of our findings and progress the research aims further, we have also considered questions that draw on an autopoietic epistemology.

The Current Orthodoxy: Performance Improvement, Psychological Contracts and Knowledge Transfer

The current, representationalist orthodoxy on the knowledge and learning at work has been, and continues to be, heavily informed by cognitive psychology (Fox, 1997). However, the specific issue of the link between HRD and performance improvement constitutes a relatively new body of literature that has attempted to combine economic theory (e.g. human capital and sustainable resource theory), psychological theories (e.g. behaviourism and cognitive approaches) with systems models. These models have stressed the interdependence of the environment inputs-processes-outputs and feedback in positive HRD interventions (Swanson, 1999). Unifying features of this literature is its emphasis on hard and soft outcomes and on the properties of good measurement (Bates, 1999).

At the individual level, a number of attempts have been made to identify the effects of HRD interventions on hard and soft dependent variables including job competences, complex relational skills and cost reduction (Mulder, 1999). A related line of recent research is the attempt to link HRD to employee perceptions of *psychological contracts* (Guest, 1998; Martin, Pate & McGoldrick, 1999), which also incorporates work on the perceptions of organizational justice and fairness (Wooten & Cobb, 1999) and trust relations. There is neither time nor space to go into the voluminous literature on psychological contracts (for a full and up-to-date discussion, readers are referred to the special issue of the Journal of Organizational Behaviour, Volume 19, 1998). However, as Guest & Conway (1997) and Guest (1998) have argued, fairness, trust in management and the extent to which the "deal" is delivered are key components of psychological contracts and have important consequences for organizational commitment, job satisfaction, organizational citizenship, intention to stay, employee performance and, by implication, knowledge transfer.

Drawing on Guest's (1998) framework (see Figure 1), we can link his notion of "delivery of the deal" to what cognitive researchers have called the "knowledge transfer climate" (Tennant, 1999). This latter idea has allowed these researchers to take on board the influence of local context in transfer by focusing on the quality of the transfer climate, the main elements of which are:

- Manager support, including assistance and feedback
- The opportunity to use knowledge
- Peer support, including assistance and feedback
- Manager indifference or opposition
- Positive personal outcomes, including career advancement
- Negative personal outcomes, such as being overlooked for salary increases
- Group resistance to applying new forms of learning

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[1] This research is part of a wider programme of work funded by the Carnegie Trust of Scotland.

Thus, by making a minor adaptation to Guest's (1998) framework of the causes, content and consequences of the psychological contract, we can treat employee perceptions of psychological contracts, including the transfer climate, as intermediate or mediating variables between investment in HRD through education and training and outcomes such as job satisfaction, organizational commitment, intention to stay and knowledge transfer for improvements and innovations (see Figure 1).

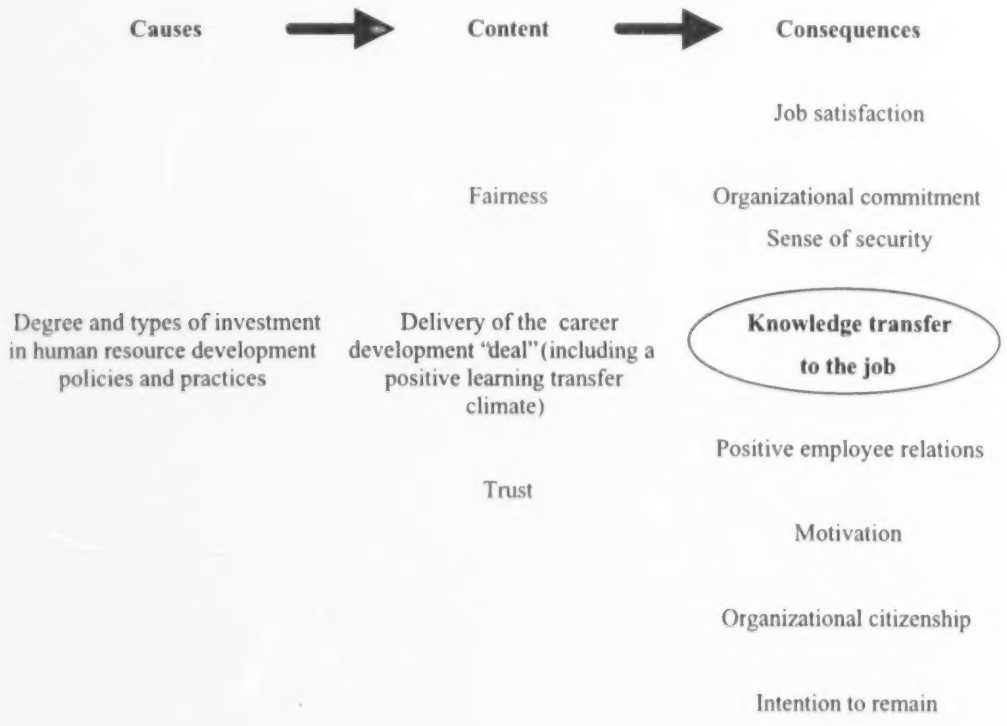
This framework poses two general lines of questioning that, among others, have theoretical and practical relevance and which we have attempted to answer in our case study.

1. Was there a pay-off to the organization in knowledge or learning transfer at the individual level? More specifically:

- *To what extent was such knowledge perceived by participants to be valuable to the company, now and in the future?*
- *To what extent did participants believe that they used formal knowledge to make improvements/innovations in their jobs?*
- *How did formal or explicit knowledge rate against other source of learning for job improvements?*

2. Was there a relationship between positive perceptions of the transfer climate and the willingness to transfer knowledge, as predicted by the "transfer climate" literature?

Figure 1: *A Framework for Understanding the Relationships between HRD investment, the content of psychological contracts and their outcomes. (adapted from Guest, D. E. (1998) Is the psychological contract worth taking seriously, Journal of Organizational Behaviour, 19, 649-664.)*



Alternative Approaches to Learning: Situated Learning

Psychological research on the sources of knowledge and learning transfer has suggested that merely having knowledge is not enough for learning to take place and that one must learn to use knowledge in particular contexts (Singley and Anderson, 1989). Certain strands of research in this field has not been promising for educationalists, in

so far as transfer from the classroom into the workplace does not seem to occur in a meaningful or significant way. As Tennant (1999), however, has argued, this conclusion may be a consequence of the rigorous and narrow definition of transfer used by a number of psychologists, which tends to stress "embrained knowledge" (Blackler, Crump & McDonald, 1998) rather than tacit (Nonaka & Tageuchi, 1995) or "encultured knowledge". Such research also excludes the role of educationalists in facilitating transfer.

One recent approach that has much to offer, both as an alternative theory and as a critique of cognitive approaches, is situated learning (Lave & Wenger, 1991).. Following from its autopoietic roots and methods of data collection, situated learning, naturally enough, has emphasised the social and practical elements of learning that occur at work outside of the classroom:

- The focus on work practice as the key to learning and on communities of (work) practice rather than practitioners
- The role of communities of practitioners in socially reproducing communities of practice through an asymmetrical "apprenticeship system" of masters and newcomers. Thus, gradually, newcomers, who engage in "legitimate peripheral participation", essentially watch and learn-by-copying skilled practitioners rather than from engaging in formal learning in detached classrooms.
- The overlapping and interdependent nature of communities of practice, in which communities depend on others for services, ideas and other resources, including new entrants.

The critique of traditional education implied by Lave & Wenger (1991) and others (e.g. Marsick & Volpe, 1999; Seely Brown & Duguid, 1994) is that classroom learning or "schooling" produces adults who *know what* rather than *know how*. Moreover, because they engage in distinctive "communities of discourse", they run the risk of becoming detached from their communities of practice. The effects of this detachment process are significant because in separating adult students and their teachers from practice, schooling effectively alienates learners, in a sociological sense, from the performative world of work. Furthermore, as researchers have stressed, since learning is a communal activity and the tacit knowledge that results from such learning resides in informal communities of practice, formal attempts to capture such knowledge through project teams and the like may be self-defeating because they ignore or overwhelm the informal sources of knowledge creation.

As Fox (1997), however, has noted, Lave and Wenger's (1991) position is not anti-schooling, but is intended to highlight the problems of traditional, formal education and to show how much of what we learn occurs during informal practice. Moreover, as we have already noted, these communities of practice rely on, and operate through, a discourse of practice that may be heavily influenced by "academic discourse", depending on the professional knowledge base and socialization of practice members. Finally, the educationalists traditional response to such criticisms of "relevance", were forcibly illustrated by March (1999, August) in his address to the Academy of Management. Adopting a similar position to critics of competence-based approaches to human resource development (e.g. Holman & Hall, 1996), he argued that education had to be detached from immediate relevance to transcend the specific, localised levels of tacit knowledge that cannot be transferred to other situations and to avoid the vested interests and "blindspots" (Weick, 1999, August) that bedevil much of what passes for practical knowledge.

This brief discussion of the situated learning literature has led us to address a further, third line of questioning among participants in the study:

3. Did formal knowledge gained through schooling (i.e."talking about practice") help them to engage more effectively in a discourse of practice (i.e. "talking within practice") or in practice itself?

Method

The Case of NCR (Dundee) and Education-for All

The case study is of NCR (Dundee), a Scottish subsidiary of a major US multinational enterprise (MNE). The Dundee plant is a world leader in the design and manufacture of automatic teller machines (ATM's) and has won a number of awards for its exporting and manufacturing performance (Wheatley & New, 1997). In the early 1990s, the Scottish plant's senior management began Education-for-All to produce significant organizational change and achieve the Dundee company's strategic objectives of growth through continuous innovation, customer-focus and cost-competitiveness.

The EFA programme, which has been in operation for eight years, embodies the principles of lifelong learning.. First it has committed the company to learning for all employees with a broad focus on education rather

than training in skills development for a selected few. Second, education has been made accessible through easy access to well-stocked flexible learning centres in the company and through close links with local universities and colleges. Third, the company has encouraged self development through a well-developed career management system and courses in career development for employees, by paying the fees for any education course broadly related to the company's business and by giving employees time off work to undertake such courses.

The take-up on courses has been impressive with participation in education courses rising from 9% of all employees in 1991 to 20% in 1998. Such courses have included an introductory electronics certificate for all shopfloor staff, an extensive engineering degree programme designed to upgrade technicians, participation in a consortium masters programme and support for doctoral programmes.

The backdrop to the research project is as follows. After a decade of mass redundancies during the 1970s, the NCR plant has experienced nearly twenty years of growth in sales and profits, largely associated with the market for ATM's and other financial service machines. From the mid-eighties onwards, with the exception of only a few years, it has been the global market leader in the design, development and production of ATM's. In 1997, however, a change in (US-driven) corporate direction towards a "solutions" strategy resulted in significant outsourcing and in the recent sale of world-wide manufacturing facilities. These changes have had a clear impact on the EFA programme which has come under close scrutiny by corporate headquarters.

Data Collection

The first stage of the data collection process occurred during the period May – July, 1999 and involved a survey of a cohort of employees who participated in at least one EFA course beginning in 1995. These data were compared with a matched sample of employees who undertook no EFA course during the period to provide benchmarks for career movements, salary differentials and perceptions of psychological contracts. This control group were matched as closely as possible for age, grade and department.

The cohort of participants who were surveyed numbered one hundred and fourteen and exactly the same numbers were surveyed in the control group. These people completed self report questionnaires during group sessions that were arranged in working time, individual "drop-in sessions" for those who could not make the groups sessions and, finally, e-mailed questionnaires to the remainder. This three-pronged approach resulted in response rates of 63% and 55% for the EFA group and control group respectively.

The characteristics of the EFA respondents (hereafter referred to as the "sample") and the control group respondents ("control group") were very close in gender (approximately 85% male) and in age, although the sample modal age was 36-40 compared to 31-35 for the control group. Educationally, as might be expected, the control group had a greater preponderance of people with only school qualifications, whilst people with HND's and postgraduate qualifications were much more evident in the sample. However, the two groups were closely matched in terms of first degree level qualifications.

Following this survey stage, we undertook in-depth interviews with a random sample of twenty-five participants and compared the interview transcripts with a matched sample of non-participants. The aim of this stage of the investigation was to dig deeper into perceptions of participants of their psychological contracts and, especially into their perceptions and views on knowledge transfer. The interview material was transcribed and analyzed for key themes with the assistance of NUDIST.

Findings

1. The Payoff to the Organization in Learning Transfer to the Workplace

(i) In the survey, we asked the sample and control groups to think of an innovation or improvement that they had made in their jobs and then to indicate from a number of alternatives the most important source of knowledge that they had drawn on to make the change in their work environment. As predicted by situated learning theorists, Table 1 below showed that previous work experience was the most frequent response. The table also showed, however, that the sample group was nearly as likely to record formal or explicit knowledge as a source of improvement or innovation and was significantly much more likely to mention this source than the control group.

(ii). The sample group was asked a series of questions concerning their perceptions of the transfer of their learning from their EFA course(s). Table 2 below provides encouraging reading for proponents of formal knowledge since respondents agreed that they had used their knowledge and skills from their courses to enhance

their work performance and were even more likely to have agreed that their courses were likely to lead to benefits in the future. The interview data showed a greater degree of variation on the direct contribution of formal knowledge to improvements and innovation. First, most respondents found difficulty in separating the sources of knowledge that they drew upon to make changes in their work environment. However, the majority of interviewees valued the formal aspects of their knowledge as an input into work practice. Interestingly, a difference was found between those who had attended technical courses, of which interviewees had high expectations regarding "usefulness" and those who had completed management qualifications, most of whom had lesser expectations of immediate relevance. Somewhat surprisingly, given the greater surface relevance of technical courses, interviewees found the content to be more abstract and theoretical and, thus, less useful in their work environment. This negative aspect of their education was all the more marked because of their initial high expectations of such courses. In contrast, the lower expectations that participants had of general management courses coupled with the relatively high use value of these courses showed them to be of greater benefit, especially in providing a holistic understanding of the business environment.

Table 1. The most important source of knowledge used to make a job improvement or innovation

Source	% Sample	Rank Sample	% Control	Rank Control
Previous work experience	42	1	54	1
Off the job education and training	38	2	26	2
Advice from colleagues	14	3	15	3
Advice from manager/supervisor	4	4	2	4=
Other	2	5	2	4=

Table 2. The extent to which the sample group signified learning transfer

Question	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Mean
I have used the knowledge and skills from my EFA course(s) to enhance my work performance	18	55	18	3	3	2.54
EFA has improved my understanding of the general environment in which I work	18	49	18	7	7	2.37
EFA has improved my ability to communicate in the business environment	16	51	20	7	6	2.36
I believe that the company will benefit in the future from the knowledge and skills I have gained from my EFA course(s)	20	63	12	1	4	2.08

2. Perceptions of the Transfer Climate and Knowledge Transfer

Although the survey data showed that what had been "promised" in career terms had largely been delivered, (Martin, Pate, Beaumont & McGoldrick, 1999, September), the company was generally perceived as having failed to create a positive transfer climate. For example, 60% of the sample and 57% of the control group claimed not to have had a career development interview in the last two years, despite it being company policy to do so for most grades of employees. Moreover, two thirds of the sample claimed that their managers took little or no interest in their studies. Consequently we wished to ascertain the extent to which these features and other aspects of the transfer climate may have mediated the effects of EFA on knowledge transfer.

Somewhat surprisingly, our data showed no significant correlation among any of the transfer climate variables and our questions concerning the extent of learning transfer. Similarly, there was no significant correlations between aspects of the psychological contract such as fairness or trust in management and knowledge transfer. The only variables to correlate significantly with the extent to which knowledge had been used from EFA programmes to improve work performance were: (i) the degree of continuance commitment ($r=0.375$, $p=0.002$), (ii) the extent to which EFA had improved their view of NCR as an employer ($r=0.377$, $p=0.002$), and (iii) pride in the company ($r=0.273$, $p=0.025$). These findings on the effects of the transfer climate have to be tempered by some of the interview data which indicated that incentives to innovate which were built into the appraisal systems of engineers did have a positive effect on learning transfer.

3. Talking about Practice, Talking Within Practice and the Effects on Practice

As might be expected given that the kind of knowledge gained from schooling is likely to be at an abstract, theoretical level, the data also showed that the learning from their course had helped employees to gain an understanding of their general work environment, Arguably more importantly, however, the survey data also showed that participants felt that that their courses had given them led to a greater ability to communicate in the business environment. The subsequent interviews highlighted two major effects of the "new language" gained during their courses: first, by providing learners with *greater confidence* and, second, by giving them a greater *understanding the role of different departments and their relationship to them* (e.g. marketing.]

During the interviews, we pressed the sample group to elaborate on how formal knowledge had been used to make improvements and innovations in their jobs and to compare such schooled knowledge with tacit knowledge borne out of experience as a source of innovation. From the responses, we gained two strong impressions. The first of these, as already noted, was that participants had great difficulty in disentangling the various sources of knowledge from each other as they merged together over time. The second was that organizational improvements and innovations were rarely seen to be made as a consequence of individual intuition, but were mostly described in communal terms. Interviewees either talked positively about "creative brainstorming" and how "they tossed ideas around" in their workgroups to come up with innovations, or else they described, in more negative terms, how individual ideas were constrained by the need to ensure that the effects of their ideas did not effect other departments. In effect, significant improvements and innovations were seen to be a function of the workgroup or constrained by the need for organizational integration.

Discussion

The overall pattern of results provides general support for the argument that this programme of investment in lifelong learning has paid off for the employer in providing a basis for individual and organizational learning in the workplace. As Crossan, Lane & White (1999) have argued, one cannot have organizational learning without individual learning taking place beforehand. The process of feeding forward from individual to organizational learning rests on a process of "intuiting" that combines learning from formal schooling and informal experience.

The key findings from the study were that:

- Participants in EFA perceived that the knowledge gained was useful in providing them with a discourse of practice and an holistic understanding of their working environment (Lave & Wenger, 1991). As such, this greater ability to talk about practice appears to have given participants greater confidence to talk within practice and understand their role in the wider business environment. There was also some evidence from the survey that education had been used to make small improvements in their immediate job context.

- In line with the arguments of situated learning theorists, however, participants found it hard to identify the specific sources of learning and, if anything, stressed the informal and tacit rather than the formal, schooled sources of knowledge as key sources of innovation. Moreover, learning and innovation were seen to be a communal activity and facilitated or hindered by the extent of departmental integration and, as the interviews showed, positive incentives to use their learning.
- Where the company was perceived to have been less successful was in creating a strong transfer climate, especially in the lack of supervisor support for learning transfer.

What is most surprising, at least as far as the literature is concerned, is that negative employee perceptions of the transfer climate did not seem to be associated with learning transfer, except in general terms. One possible explanation may be that the sample was composed of career resilient, self starting individuals whose goals were more characterized by personal development, employability in the long term and psychological growth (Hall & Moss, 1998). Thus so long as departmental managers were not actively blocking or discouraging the sample group, these people were likely to use their knowledge to meet their personal goals. In short, the absence of career development systems, e.g. appraisal etc. and tangible rewards did not seem to prevent these individuals from using their knowledge. Moreover, contrary to much of the human resource literature, it is at least questionable that investing time and effort in improving these systems would have much effect..

We recognise the limitations of generalising from single, particularly atypical cases. Moreover, we are fully aware that our measures of knowledge transfer were self-perceptions. However, we hope to undertake some participant observation among informal groups to explore the processes involved in feeding forward from individual learning to group and organizational learning (Crossan, Lane & White, 1999). This will allow us to explore workplace learning from a situated learning perspective, particularly as it relates to communities of practice. However, given the these limitations, the case study data is sufficiently robust to suggest that employers who follow such (atypical) policies may reap significant rewards and which are a genuine source of competitive value.

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